Development of a Project and Analytic Plan for Health Resource Planning

Presented to the Health Planning Council

April 24, 2013

INNOVA | Healthcare Solutions

Freedman
HEALTHCARE

Goals for Today's Discussion

- **Introduce the Freedman team**
- **Share high level overview of the project and its objectives**
- **Share findings from initial conversations from Council members**
- **Council consensus on priorities for Health Planning in 2013**
- **Share preliminary findings of data gaps**
- **Discuss recommendation for geographic hierarchy for health planning**
- **Discussion and feedback on recommended Health Planning Framework**

Agenda

- **Introduction and Project Overview**
- **Health Planning in Other States**
- **Services Included in Health Planning**
- **Data Sources and Limitations**
- **Geographic Areas for Analysis**
- **Framework for Health Planning**
- **Next Steps**

Overview of Project & Analytic Plan - Project Goals

- Deliver a Project and Analytic Plan with recommended approach for State Health Planning
- Identify data sources, gaps, and approaches to fill gaps
- Define methodologies for measuring baseline and estimating future supply and demand
- Estimate resources needed for health planning activities
- Finalize project and analytic plan by June 30 to support the creation of the Planning Vendor RFP

Key Efforts to Accomplish Within Analytic Plan

1. **Population Demographic Forecast**
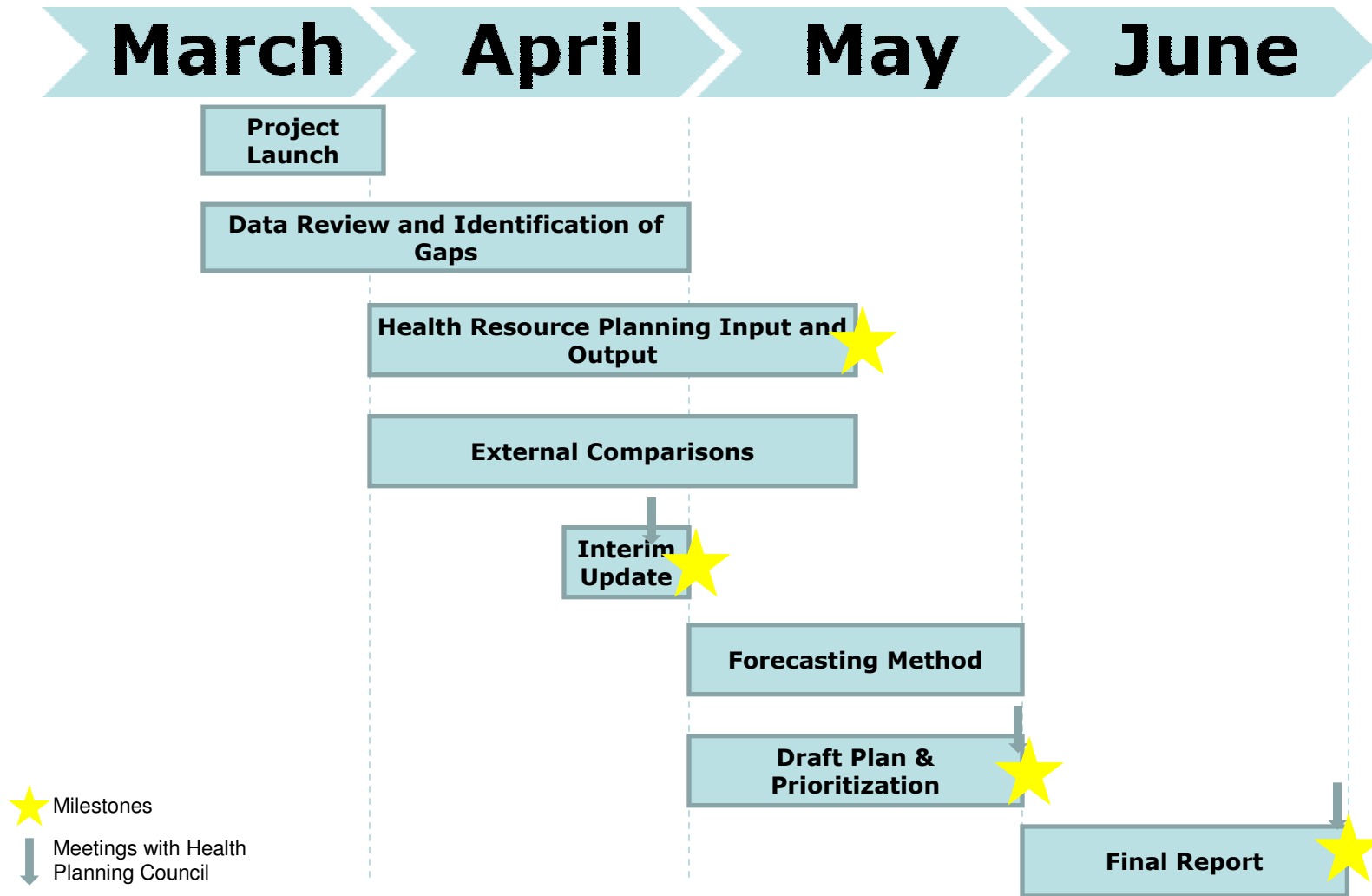   - **Growth & Aging as a minimum**

2. **Demand**
   - **Existing**
     - **Is it available?**
     - **Can it be stratified by age or other patient characteristics?**
   - **Forecast**
     - **Historical Utilization**
     - **Benchmark Utilization**
       - **State Model vs other (Kaiser, NCHS)**
     - **Effects of Delivery System Changes on Demand**

3. **Supply**
   - **Existing**
     - **How do we count up what we need (bed types, physicians, ORs, etc.)?**
   - **Forecast**
     - **Historical Benchmark**
     - **Benchmark Productivity**
     - **Expected Productivity Changes (e.g., impact of connected health, email health, etc.)**

Schedule for Development of Project and Analytic Plan

March	April	May	June

Project Launch

Data Review and Identification of Gaps

Health Resource Planning Input and Output ⭐

External Comparisons

Interim Update ⭐

Forecasting Method

Draft Plan & Prioritization ⭐

Final Report ⭐

⭐ Milestones

↓ Meetings with Health Planning Council

6

Health Planning in Other States

Health Planning in Other States

- **Health Resource Plans from 4 states were reviewed in order to provide guidance in the following areas:**
  - **Purpose and priorities, linkages to other state planning/processes**
  - **Timing and frequency**
  - **Scope of health services included**
  - **Data sources used**
  - **Planning for special populations**
  - **Methods used for forecasting**
  - **Implementation of health planning activities**
- **State plans vary from being very prescriptive to providing guidance on health resource planning**
- **Findings from these activities may inform decisions for health planning in Massachusetts**

North Carolina

Reviewed 2013 plan. Planning is legislatively mandated and updated annually. The major objective of the Plan is to provide individuals, institutions, state and local government agencies, and community leadership with policies and projections of need to guide local planning for specific health care facilities and services.

Scope of Planning (services/providers/ facilities)	Comments on Methodology	Special (or vulnerable) Population focus	Special considerations (e.g., HCR/ ACA, demographics, HIT)	Alignment with other state initiatives? (e.g., state health agenda)

Acute:
   Acute Hospital Beds
   IP and OP Operating Rooms
   Open Heart Surgery Service
   Burn ICU
   Transplant
   Inpatient Rehab Services
Technology:
   Lithotripsy
   Gamma Knife
   MRI
   PET
   Cath
Long Term Care:
   Nursing Care Facilities
   Adult Care Homes (Assisted Living)
   Home Health Services
   Hospice Services
   ESRD Dialysis
Psych/Substance Abuse:
   Psych IP
   Substance Abuse IP and Residential
   Intermediate Care Facilities for Intellectual Disabilities
	Mostly uses past 4 years to forecast future 4 years. For OR's uses pop growth only.
	
	Uses Truven Health Analytics Historical Days of Care; Hospitals and other licensed providers must provide other volume data in specified way annually as part of licensure renewal (MR, RT, etc.)
	
	Need mostly measured at the County level (100 counties in NC), but defines service areas differently by care type—allowing for "multiservice areas"
	
	Determination of need is based mostly on projected utilization compared to a target occupancy rate
		Basic Principles:
		   Safety & Quality;
		   Access (time, distance, economic, disabilities, etc.);
		   Value & affordability-balance of competition and cooperation
			None noted. Appears to mostly use past volumes and pop growth only. Does allow for lower resource utilization in low population areas	Completely integrated with Certificate of Need (CoN) process

Connecticut

Reviewed 2013 plan. Updated biannually by law. The Plan, considered an advisory document, is intended to be a blueprint for health care delivery, serving as a resource for policymakers and those involved in the CON process and providing information, policies and projections of need.

Scope of Planning (services/providers/ facilities)	Comments on Methodology	Special (or vulnerable) Population focus	Special considerations (e.g., HCR/ ACA, demographics, HIT)	Alignment with other state initiatives? (e.g., state health agenda)

Acute Care Beds, Oncology Beds, Cardiac Beds
 	
Generic guidelines and description & quantification of existing services, but no calculations of need/surplus for:
    ED
    Cardiac Services
    Outpatient Surgery
    Imaging and New
    Technology
    Medical Rehab
    LTAC
    Nursing Home
    Rest Home
    Residential Home
    Care
    Hospice Inpatient
    Assisted Living
    CCRC
    Congregate Living
    Adult Day
    Home Care
    Behavioral Health
    Primary Care
	Simple, high level, straight forward methodology for beds (straight line forecast from historical trends), but recognizes "further study is required" to plan at better level of detail
	
	Mostly descriptive of guidelines for quality, definitions of service, and summary of existing services.
		Descriptive only on generic needs to address special populations.
		
		"Community Health Needs Assessments will become a valuable resource for hospital planning for future versions of the Plan.
		
		Vulnerable populations and their needs may vary substantially from one community to another, and through implementation of its Statewide Health Care Facilities and Services Plan, DPH may have the opportunity to play a role in planning to channel community benefit efforts appropriately"
			Recognizes that ACA, coverage expansion, mergers, HIT, etc. will have an impact on future needs and supply in a generic descriptive fashion.
			
			Money Follows the Person program encourages more home-based rather than nursing home care
			
			Recognizes that aging will increase demand in a generic descriptive fashion
				Integrated with CoN
				
				Goal to provide various entities with information, policies and projections of need (in some cases) to guide the planning for specific health care facilities and services and the state's health care system.
				
				Relationship to Healthy People 2020 (national) – specifically the "Access to Health Services" component
				
				Concurrent work on a State Health Assessment and State Health Improvement Plan. The DPH will eventually try to tie the findings together with the facilities and resources plan.

Illinois

Reviewed 2013 plan. Developed annually by law, with monthly updates of inventory. The Health Facilities and Services Review Board, through its CON program aimed at containing health care costs, approves or disapproves applications for construction or expansion of health care facilities to avoid unnecessary duplication and promote development in areas where needed.

Scope of Planning (services/providers/ facilities)	Comments on Methodology	Special (or vulnerable) Population focus	Special considerations (e.g., HCR/ ACA, demographics, HIT)	Alignment with other state initiatives? (e.g., state health agenda)

Inpatient Beds & Cardiac:
   Medical/Surg & Pediatric Care
   OB care
   Intensive Care
   Comprehensive Physical Rehab Care & LTAC
   Acute Mental Illness
   Neonatal Intensive
   Long Term Acute
   Open Heart Surgery
   Cardiac Catheterization
   Selected Organ Transplantation
 Bed Need for Long Term Care:
   Long Term Nursing
   Developmentally Disabled Care
   Chronic Mental Illness
 Other:
   Dialysis
   Ambulatory Surgery (volumes and capacity only. No need determination)
	Uses different planning areas for different services
	
	 Uses 3 year average utilization rate by area against forecasted population
	
	 M/S and peds bed need (but not ICU) accounts for in and out migration across service areas
	
	 Compares actual to "minimum expected" and/or "maximum expected" for the non-acute services. The intention is to address relative under or over-utilization of post-acute services
	
	 Note: min/max is based on utilization at other regions within the state
		Not addressed— except that beds for Developmentally Disabled Children and Adults are included	Does not talk about reform, but has very prescriptive number of allowed sites for "subacute alternative model of care hospital" "post surgery recovery hospital" and "respite care model" and "community based residential care"	Integrated with CoN

Kentucky

Reviewed 2013 plan. Prepared triennially, updated annually. The KY CON process prevents the proliferation of health care facilities, health services and major medical equipment that increase the cost of quality health care. The KY health plan sets criteria that shall be used when reviewing applications for CON.

Scope of Planning (services/providers/ facilities)	Comments on Methodology	Special (or vulnerable) Population focus	Special considerations (e.g., HCR/ ACA, demographics, HIT)	Alignment with other state initiatives? (e.g., state health agenda)
Acute Care Hospital Beds Comprehensive Physical Hospital Beds Special Care Neonatal Beds Open Heart Surgery Program Organ Transplant Program Psychiatric Hospital Beds Psychiatric Residential Treatment Facility Nursing Facility Beds Home Health Service Hospice Service Residential Hospice Facility Adult Day Health Care Program ICR/DD Cardiac Cath Services MRI, PET Linear Accelerator Ambulatory Surgery Center Chemical Dependency Treatment Beds Outpatient Healthcare Center	Gives criteria for the CoN, referencing occupancy/use of existing services found in detailed volume reports at the "Area Development District" for PET, MR, Linac, Inpatient, Beds, Home Health, etc. (available on its website)

Applicant needs to prove the Area will fall within certain guidelines after the new service is in place

Uses licensed beds as the denominator in calculating IP occupancy

Gives specific statewide totals allowed for Psych. Residential Treatment Facilities (no method for calculating this found)

Has formula for determining hospice need | None noted- other than IP and residential mental health. Also allows for "Outpatient Care Centers" (i.e. a hospital without beds) in areas with at least 60K population and no hospital

Does not include social services, primary care, OB, etc. | None noted | Integrated with CoN |

Services To Be Included in Massachusetts Health Planning

Scope of Services

- **The list of services identified in the statute is broad and, in some cases, vaguely defined**

- **The following slides reflect one of the tools the Freedman team is using to rationalize the recommended scope of services for health planning**

Note: Key for the following table **–** Most services listed are from the statute
Indented = Freedman clarification of services included under a broad category from the statute
Italicized = Freedman recommendation of additional services to include

Scope of Services

	Included in Other State Plans reviewed (n=4)	Source of Demand Data from reviewed plans (n=4)	Source of Supply Data from reviewed plans (n=4)	Similar MA data available DEMAND?	Similar MA data available SUPPLY?
Primary Care					
Family Planning Services	No	N/A	N/A		
Health Screening	No	N/A	N/A		
Early Intervention	No	N/A	N/A		
Substance Abuse Prevention Services	No	N/A	N/A		
Substance Abuse Treatment Services					
Outpatient Counseling	No	N/A	N/A		
Psychiatrists	No	N/A	N/A		
Psychologists	No	N/A	N/A		

Scope of Services

	Included in Other State Plans reviewed (n=4)	Source of Demand Data from reviewed plans (n=4)	Source of Supply Data from reviewed plans (n=4)	Similar MA data available DEMAND?	Similar MA data available SUPPLY?
Mental Health Treatment	No	N/A	N/A		
Outpatient Counseling	No	N/A	N/A		
Psychiatrists	No	N/A	N/A		
Psychologists	No	N/A	N/A		
Primary Care Resources	General quantity of PCPs (in CT report)	AMA/CT Physician Reports, HSUAs		No. Eventually through APCD	Yes- MMS, Insurance Lists

Scope of Services

	Included in other State Plans reviewed (n=4)	Source of Demand Data from reviewed plans (n=4)	Source of Supply Data from reviewed plans (n=4)	Similar MA data available DEMAND?	Similar MA data available SUPPLY?
Pediatrics	No	N/A	N/A	No. Eventually through APCD	Yes- MMS, Insurance Lists
Adult Medicine	No	N/A	N/A	No. Eventually through APCD	Yes- MMS, Insurance Lists
Urgent Care Centers	No	N/A	N/A	?	?
Minute (Midlevel) Clinics	No	N/A	N/A	?	?
Obstetrics & Gyn Services	No	N/A	N/A	No. Eventually through APCD	Yes- MMS, Insurance Lists
Allied Health Services including but not limited to:					
Dentistry	No	N/A	N/A	No. Eventually through APCD?	Registration; Insurance Co
Optometry	No	N/A	N/A	No. Eventually through APCD?	Registration; Insurance Co
Chiropractic	No	N/A	N/A	No. Eventually through APCD?	Registration; Insurance Co?

Scope of Services

	Included in other State Plans reviewed (n=4)	Source of Demand Data from reviewed plans (n=4)	Source of Supply Data from reviewed plans (n=4)	Similar MA data available DEMAND?	Similar MA data available SUPPLY?
Pharmacy and Pharmacological Services	No	N/A	N/A	?	?
Dialysis Unit	Yes	Surveys at licensure; state routine state data capture	Surveys or Licensure	Yes-Medicare Data?	Yes- Medicare Data?
Long Term Care	Yes	Surveys at licensure; state routine state data capture	Surveys or Licensure	LTC use set? Medicaid Data?	Yes- Licensure
Assisted Living	Yes	Surveys at licensure; state routine state data capture	Surveys or Licensure	?	?

Scope of Services

	Included in other State Plans reviewed (n=4)	Source of Demand Data from reviewed plans (n=4)	Source of Supply Data from reviewed plans (n=4)	Similar MA data available DEMAND?	Similar MA data available SUPPLY?
Emergency , OB/Gyn and Acute					
Emergency Care	Volume only in CT	State data set-demand only	None	HDD	No? If "number of bays" is needed
Acute Care Units	Yes	HDD	Licensure	HDD	Yes- Licensure
Cancer Care Units	No	N/A	N/A	HDD	No?
Surgical Inpatient Beds	No	N/A	N/A	HDD	Yes?
OP ORs	Yes	Surveys at licensure; state routine state data capture	Surveys or Licensure	HDD	Yes?
IP ORs	Yes	Surveys at licensure; state routine state data capture, HDD	Surveys or Licensure	HDD- surgical DRGs	No?
Labor & Delivery	No	N/A	N/A	HDD	Yes- Licensure?
Post Partum ("Post OB care")	Yes	HDD	Licensure	HDD	Yes- Licensure

Scope of Services

	Included in other State Plans reviewed (n=4)	Source of Demand Data from reviewed plans (n=4)	Source of Supply Data from reviewed plans (n=4)	Similar MA data available DEMAND?	Similar MA data available SUPPLY?
Pediatric Inpatient Beds				HDD?	Yes- Licensure?
Substance Abuse Inpatient Beds/Acute Care	Yes	Truven or HDD		Yes- HDD	Yes- Licensure
Substance Abuse Residential Treatment	Yes	Surveys at licensure time or other electronic data capture			
Mental Health Inpatient Beds/Acute Care	Yes	Truven or HDD		Yes- HDD	Yes- Licensure
Mental Health Residential Treatment	Yes	Surveys at licensure time or other electronic data capture		?	Yes- Licensure?
Air Ambulance Services (Innovative/New on DoN)	No	N/A	N/A	?	Yes-Licensure?
Megavoltage Radiation Therapy (new/innovative on DoN)	Yes	Surveys at licensure; state routine state data capture	Surveys or Licensure	No?	Yes- DoN/Licensure

Scope of Services

	Included in other State Plans reviewed (n=4)	Source of Demand Data from reviewed plans (n=4)	Source of Supply Data from reviewed plans (n=4)	Similar MA data available DEMAND?	Similar MA data available SUPPLY?
Mag Res Image (MRI) (Innovative/New on DoN)	Yes			No?	?
Home Health Care	Yes	Surveys at licensure; state routine state data capture	Surveys or Licensure	No? Some Medicare and Medicaid data?	List of licensed facilities-- but not much more?
Long Term Acute Care	Yes	Surveys at licensure; routine state data capture	Surveys or Licensure	HDD	Yes-Licensure
Skilled Nursing	Yes	Surveys at licensure; state routine state data capture	Surveys or Licensure	Nursing Home Discharge set? Medicare Data?	Yes- Licensure
Tertiary					
Trauma (statute does not separate pediatric from adult)	Yes- Supply only	None	List of licensed providers	HDD?	Yes- Licensure
ICU (statute does not separate pediatric from adult)	Yes	HDD	Licensure	HDD?	Yes- Licensure

Scope of Services

	Included in other State Plans reviewed (n=4)	Source of Demand Data from reviewed plans (n=4)	Source of Supply Data from reviewed plans (n=4)	Similar MA data available DEMAND?	Similar MA data available SUPPLY?
Coronary Care	N/A		N/A		No?
Cardio-Thoracic OR (New/Innovative per DoN)	Yes	HDD	Surveys or Licensure	HDD- OHS drgs	?
Pulmonary Specialty Unit	No	N/A	N/A	HDD	No?
ICU (statute does not separate pediatric from adult)	Yes				
Burn ICU	Yes	HDD	Licensure	HDD	Yes- Licensure?
NICU and Neonatal Care in statute	Yes	HDD	Licensure	HDD	Yes- Licensure
Pediatric ICU		HDD	Licensure	HDD?	Yes- Licensure?
Lithotripsy (New/Innovative per DoN)	Yes	Surveys at licensure; state routine state data capture	Surveys or Licensure	No?	Yes- DoN

Scope of Services

	Included in other State Plans reviewed (n=4)	Source of Demand Data from reviewed plans (n=4)	Source of Supply Data from reviewed plans (n=4)	Similar MA data available DEMAND?	Similar MA data available SUPPLY?
Pet Scanner (Innovative/New on DoN)	Yes	Surveys at licensure; state routine state data capture	Surveys or Licensure	No?	?
Quaternary					
Organ Transplantation Programs (New/Innovative per DoN)	Yes	HDD	Surveys or Licensure	HDD	Yes- Licensure?
ECMO Services (New/Innovative on DoN)	No	N/A	N/A	HDD	Yes- Licensure?

Data sources and limitations

Summary of Data Sources in Other States

- **Health Resource Plans typically include:**
  - **"Supply"**
    - **Detailed inventory of licensed beds by type (acute care)- critical care, med/surg, peds, post-partum, NICU, psych (though not by service line—such as cardiac and pulmonary)**
    - **Detailed inventory of post acute beds by type- LTAC, rehab, skilled nursing, residential treatment**
    - **Intermediate/Developmentally Disabled beds**
    - **Detailed inventory of ambulatory surgery centers**
    - **Detailed inventory of MRI, PET, linear accelerators, dialysis stations, lithotripsy, cath labs**
    - **Inventory of Ambulatory Surgery providers and operating rooms**
    - **Detailed list of hospice beds and home health providers**
    - **Lists of licensed/accredited trauma services**
    - **Quantity of primary care physicians by location**
  - **"Demand"**
    - **Population projections created by the state**
    - **Historical inpatient days by type of care**
    - **Historical patient days for LTAC, Skilled Nursing, Residential Care, Hospice**
    - **Historical patient counts/visits/days of care for home health**
    - **Historical visit/procedure counts for MRI, PET, linear accelerator, ambulatory surgery, emergency department visits**

- **Many of the health planning elements identified in the MA statute have not been included in other state health plans**

Preliminary Assessment of data Availability in MA

- A preliminary review of data sources available in Massachusetts identified gaps
- A much more robust process to evaluate data sources will take place once the final list of services to be included in health planning is identified
- What follows is a very preliminary summary of findings:
  - Supply data available
    - Licensed beds (acute, post acute, and nursing home)
    - Services that require a DoN (such as Linac and MRI)
    - Licensed practitioners or entities to provide various services.
  - Supply data not available
    - Effective supply - e.g. number of actively practicing FTEs, number of staffed beds, etc. (expected to be available with a new expanded registration survey)
    - No available detail on relevant types of resources specified in statute (e.g., IP beds by type such as cancer, coronary, or pulmonary–specified in the statute, PACU beds, operating rooms, emergency room bays, etc.)
    - No detail on "capacity" of many resources, from FQHCs to social services—such as number of therapists or unused capacity (e.g., unused beds)
  - Demand data available
    - Discharges by DRG, LTC days, post acute days, SNF days, ED visits and ambulatory surgery
  - Demand data not available
    - No known data on imaging tests by modality, linear accelerator treatments, home health visits by type, visit counts to optometrists, physicians, etc.—basically any workload that occurs outside of the "beds."
  - Other states have obtained the missing data elements via survey during the license renewal process

Geographic Areas for Analysis

Geographic "Hierarchy"

- **What size geographic area should be used for the analysis of individual service categories?**

- **Example: The range of acceptable distance for patients to travel for primary care is different than for an organ transplant**

- **A geographical hierarchy will allow health planning to effectively distribute resources across the Commonwealth**

Service Market Principles

- **Services as close to home as possible**
  - **Access**
  - **Quality**
  - **Cost Effective**
- **Consistent boundaries across service lines**
  - **allow for synergies targeting the same population**
  - **allow a continuum of care systematic approach to medical home**
  - **allow for measuring health and expenditure success**
- **Acknowledgement of a geographical hierarchy to care delivery that:**
  - **Anticipates necessary Emergency response time**
  - **Recognizes and strengthens existing referral patterns**
  - **Recognizes thresholds for quality care, while allowing specialization and care acuity capability to expand consistent with population growth and referral patterns**
  - **While intending to limit the proliferation of technology, capabilities and their costs where not likely cost effective.**
- **Make no geographic market boundary so small that competition is limited, change/evolution inhibited, or the results prescriptive**

Massachusetts Healthcare Service Markets

Based on experience with other health plans, Kaiser Permanente, insurance regulations, VA planning, and Military Health Service planning, we recommend the following PRELIMINARY markets. It is possible there will need to be some sub-markets in the densely populated areas

❖~90 Primary Care Service Markets

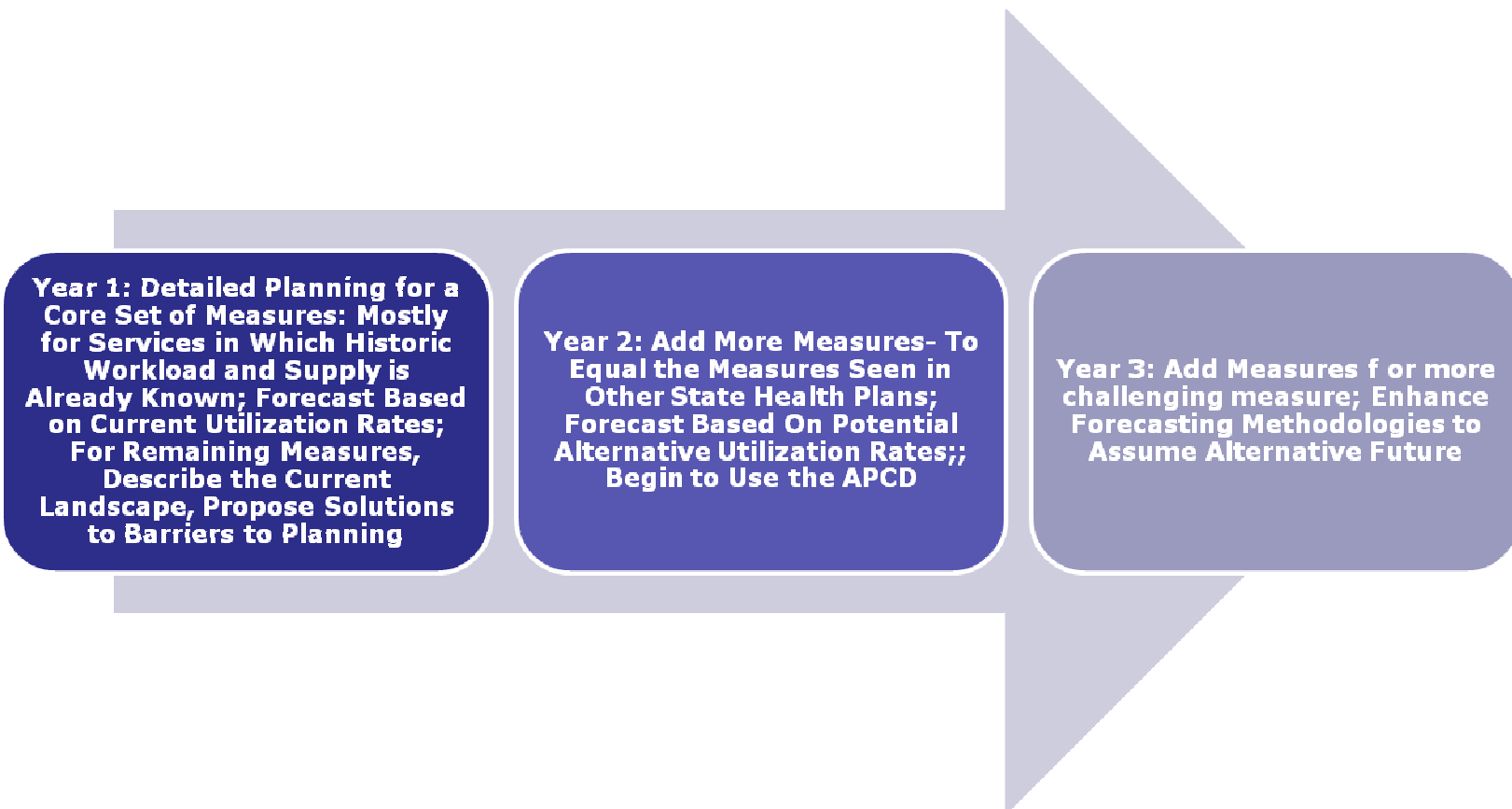❖~27-30 Emergency & Birthing Services Markets

❖5 Tertiary Care Markets

❖1 Quaternary Market

Statute Services and PRELIMINARY Recommended Healthcare Service Markets

Service Market	Accessibility Standard	Applicable Statute Services		Geographic Recommendation
Primary Care	15 minute – urban, 30 minutes otherwise	Family Planning Health Screening Early Intervention Substance Abuse Outpatient -Prevention Services -Treatment Services Pharmacy Long Term Care	Mental Health Outpatient -Treatment Services "Primary Care Resources" Optometry Dentistry Chiropractic Dialysis Assisted Living	Dartmouth Atlas PCSA (90?) approach reduced when grouped by travel time
Emergency, OB/Gyn and Acute Services	15 minute EMS + 45 minutes to the ED	**Community Acute Care** Medical/Surgical Care Substance Abuse Acute Mental Health Acute General Pediatrics Obstetrics & Gyn Services Home Health Care LTAC	Emergency care Community Trauma MRI Skilled Nursing (Sub Acute, Intermediate Care) Cancer Care; MegaVoltage Radiation Air Ambulance	Community Health Network Areas (27-30?)
Tertiary Care	As Demand & Quality Suggests	**Tertiary Acute Care** NICU Pediatrics ICU Specialty Care Units: Burn, Pulmonary, Coronary	Tertiary Trauma/Level 1 Lithotripsy Cardio-Thoracic ORs PET Scanner	Massachusetts Hospital Regions (5)
Quaternary Care	As Demand & Quality Suggests	Organ Transplants ECMO		State-wide (1)

Framework for MA Health Planning

Initial Recommendation: Develop a Tiered Approach to Health Resource Planning

Year 1: Detailed Planning for a Core Set of Measures: Mostly for Services in Which Historic Workload and Supply is Already Known; Forecast Based on Current Utilization Rates; For Remaining Measures, Describe the Current Landscape, Propose Solutions to Barriers to Planning

Year 2: Add More Measures- To Equal the Measures Seen in Other State Health Plans; Forecast Based On Potential Alternative Utilization Rates;; Begin to Use the APCD

Year 3: Add Measures f or more challenging measure; Enhance Forecasting Methodologies to Assume Alternative Future

Next steps

Proposed Process Overview – Health Planning Council Meetings

- **The FHC team will plan to meet with the HPC once each month (April-June)**
- **Meeting 1 – Week of April 22**
  - **Agenda:**
    - **Introduction and Project Overview**
    - **Health Planning in Other States**
    - **Services Included in Health Planning**
    - **Data Sources and Limitations**
    - **Geographic Areas for Analysis**
    - **Framework for Health Planning**
    - **Next Steps**
- **Meeting 2 – Week of May 27**
  - **Agenda:**
    - **Present preliminary project and analytic plan:**
    - **Validation of key definitions**
    - **Validation of forecasting methods**
    - **Prioritization/recommendations for scope options, time line, associated costs**
- **Meeting 3 – Week of June 24**
  - **Agenda:**
    - **Present project and analytic plan**

Appendix

Comparison: North Carolina

Services	Geographic Market
Med/Surg Beds ORs MRI Cardiac Catheterization	Acute Bed Service Area; Single County/Multicounty service area (mostly a county, with some overlap/combos) – approximately 100
Nursing Beds, Adult Homes, Home Health	County- approximately 100
Dialysis	County & 30 miles drive
Linear Accelerator (1 per 120K pop)	County/total pop
IP rehab beds, PET scanners	Health Service Area (6)
Inpatient Psych Substance Abuse ICF	"Local Management Entity"/Managed Care Organizations
Lithotripsy, Burn unit, Cardiac surgery, Transplants, Gamma Knife	Statewide

Primary Care Service Areas

The Primary Care Service Area Project
The Center for the Evaluative Clinical Sciences
Dartmouth Medical School

VCU   The Department of Health Adminstration
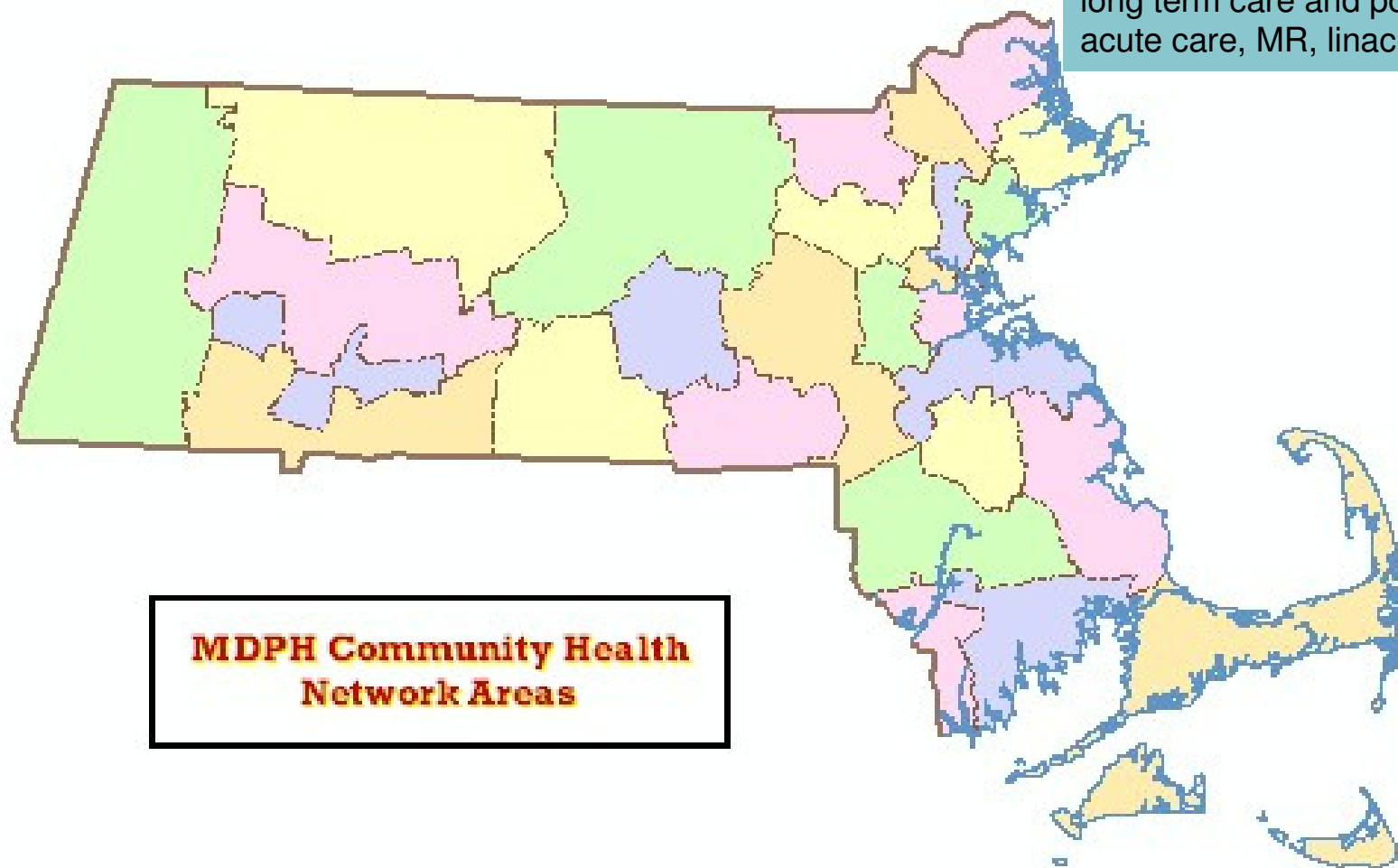Virginia Commonwealth University

Use for primary care,
prevention, allied
services
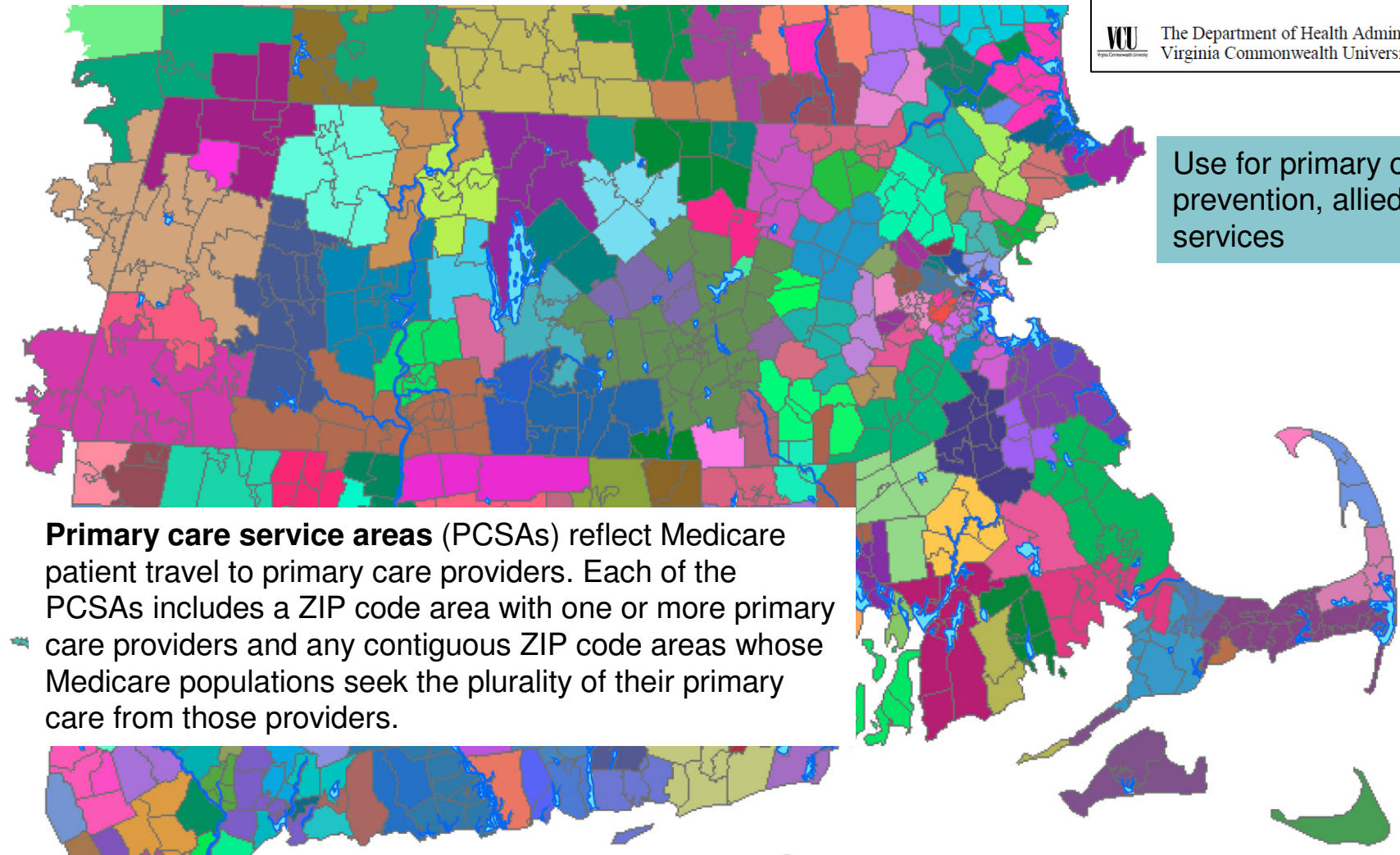
Primary care service areas (PCSAs) reflect Medicare patient travel to primary care providers. Each of the PCSAs includes a ZIP code area with one or more primary care providers and any contiguous ZIP code areas whose Medicare populations seek the plurality of their primary care from those providers.

Community Health Network Areas

Use for community level acute care services, emergency, long term care and post acute care, MR, linac

MDPH Community Health Network Areas

Massachusetts Hospital Regions

Use for tertiary care, trauma, specialty units, PET, Open Heart, lithotripsy

Northeast

West

Central

Metro Boston

Southeast